

REMARKS

In the Office Action dated June 9, 2004, claims 1-15 were rejected under 35 U.S.C. § 103 over U.S. Patent No. 5,909,465 (Bottomley) in view of U.S. Patent No. 5,212,715 (Pickert).

Claim 1 has been amended to broaden the scope of the claim. Claim 1 relates to a time-division multiplex radio communication method, wherein a transmitter transmits radio signal bursts destined for at least one receiver in time slots allocated to a channel on a carrier frequency. The radio signal of each burst is formed from a block of digital symbols including training symbols provided for an estimation of demodulation parameters by the receiver and information symbols to be estimated by the receiver by a demodulation using the estimated parameters. The training symbols comprise a first sequence of symbols placed at the start of the block from which each radio signal burst is formed and a second sequence of symbols placed at the end of said block. Each radio signal burst comprises an initial portion in which the radio signal rises in power up to a range of transmission power, a central portion in which the radio signal is transmitted within said power range, and a final portion in which the radio signal decreases in power from said power range. At least one of the first and second sequences of training symbols gives rise to a modulation of the radio signal of the burst outside the central portion. The receiver receiving a signal segment corresponding to a burst formed from a symbol block executes the steps of: estimating first demodulation parameters on the basis of the first sequence of training symbols and the start of the signal segment; calculating first estimations of the information symbols of said block on the basis of the first demodulation parameters and the signal segment scanned from start to end; estimation of second demodulation parameters on the basis of the second sequence of training symbols and the end of the signal segment; and calculation of second estimations of the information symbols of said block on the basis of the second demodulation parameters and the signal segment scanned from end to start.

As recognized by the Examiner, Bottomley does not disclose a signal burst comprising an initial portion in which the radio signal rises in power up to a range of transmission power, a central portion in which the radio signal is transmitted within said power range and a final portion in which the radio signal decreases in power from said power range. In addition, Bottomley does not describe that at least one of the first and second sequences of training symbols gives rise to a modulation of the radio signal of the burst outside the central portion,

which means that at least one of the sequences of training symbols overlaps on the rising or decreasing power ramp.

Pickert discloses a power ramp signal. However, Pickert fails to suggest, either explicitly or implicitly, that *some data, that could be assimilated to those of the first or the second sequence of training symbols of the invention, are incorporated in the initial (ramp up) or final (ramp down) portion.* Indeed, in Pickert, all the information to be transmitted (i.e., the useful information such as synchronization, voice, control error detection, overlapping), are outside the ramp up/down portions, whose utility is only to let the transmitter power up/down. The nature of the bits in the power up/down fields is not specified, because these bits do not carry any information to be transmitted.

A person skilled in the art would not have been motivated to combine Bottomley and Pickert to provide an overlap of at least one of the first and second sequences of training symbols with the rising or decreasing power ramps, as set out in independent claims 1 and 9.

This particular feature of the invention enables allocation of maximum space for transmission of the information bits, thereby optimizing the transmission rate on the channel (see page 4, lines 1-4 of the description). Such a concern is not at all mentioned in Pickert.

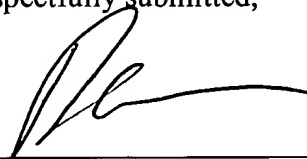
Therefore, independent claims 1 and 9 are not obvious for a person skilled in the art, when considering Bottomley and Pickert. For the same reasons, claims 2-8, and 10-15, which depend from claims 1 and 9, are similarly allowable over the cited art. Withdrawal of the obviousness rejection of dependent claims 2-8, and 10-15 is respectfully requested.

In light of the foregoing, all claims are in condition for allowance, which action is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (MTR.0003US).

Respectfully submitted,

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